

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-35. (Canceled.)

36. (Previously presented) A method for use in a code division multiple access (CDMA) user device, the method comprising:

establishing a packet data communication session with a network in accordance with a protocol architecture, the protocol architecture having a plurality of protocol layers including a physical layer;

simultaneously using a plurality of reverse traffic channels associated with the packet data communication session to transmit packet data;

wherein each of the reverse traffic channels is associated with a CDMA code and at least three of the reverse traffic channels can have different rates; and

wherein a state of at least one protocol layer above the physical layer is maintained during the packet data communication session after the plurality of reverse traffic channels have been released.

37. (Previously presented) The method of claim 36 further comprising communicating a need for a particular user data rate to a base station in the network.

38. (Previously presented) The method of claim 36 further comprising simultaneously transmitting control, voice and data information to a base station in the network.

39. (Previously presented) The method of claim 36 further comprising simultaneously transmitting control, voice and data information to a base station in the network on separate reverse traffic channels.

40. (Previously presented) The method of claim 36 further comprising multiplexing user information over the plurality of reverse traffic channels.

41. (Previously presented) The method of claim 40 wherein the user information comprises voice and data.

42. (Previously presented) The method of claim 36 wherein the user device is a portable device comprising an integrated unit having a modem, a CDMA transceiver and a controller.

43. (Previously presented) The method of claim 42 wherein the portable device comprises a terminal equipment.

44. (Previously presented) The method of claim 36 wherein the user device includes an application layer.

45. (Previously presented) The method of claim 36 further comprising running an internet application.

46. (Previously presented) The method of claim 36 further comprising downloading a web page.

47. (Previously presented) The method of claim 36 further comprising:
transmitting CDMA signals on a selected transmission frequency out of a plurality of potential transmission frequencies; and
receiving CDMA signals on a selected reception frequency out of a plurality of potential reception frequencies.

48. (Previously presented) The method of claim 36 further comprising
retrieving a stored class of service information.

49. (Previously presented) The method of claim 36 further comprising
retrieving a stored maximum data rate associated with the user device.

50. (Previously presented) The method of claim 36 further comprising
assembling and buffering packet data for transmission over a traffic channel.

51. (Previously presented) The method of claim 36 further comprising
requesting a supplemental reverse traffic channel based on an amount of packet data in a packet data queue.

52. (Previously presented) The method of claim 36 further comprising
requesting a supplemental reverse traffic channel based on a priority of service of packet data in a packet data queue.

53. (Previously presented) The method of claim 36 further comprising
requesting a supplemental reverse traffic channel based on a short term estimated

data rate desired to transmit packet data.

54. (Previously presented) The method of claim 51 wherein the request for the supplemental reverse traffic channel is made independent of an existing forward channel allocation.

55. (Previously presented) A method for use in a code division multiple access (CDMA) user device, the method comprising:

establishing a packet data communication session with a network in accordance with a protocol architecture, the protocol architecture having a plurality of protocol layers including a physical layer;

simultaneously using a plurality of reverse traffic channels during the packet data communication session to transmit packet data, wherein each of the reverse traffic channels is associated with a CDMA code and at least three of the plurality of reverse traffic channels have different data rates; and

maintaining a state of at least one protocol layer other than the physical layer during the packet data communication session after the plurality of reverse traffic channels have been released.

56. (Previously presented) The method of claim 55 further comprising communicating a requested data rate for the packet data communication session to a base station in the network.

57. (Previously presented) The method of claim 55 further comprising simultaneously transmitting control, voice and data information to a base station in the network.

58. (Previously presented) The method of claim 55 further comprising simultaneously transmitting control, voice and data information to a base station in the network on separate ones of the plurality of reverse traffic channels.

59. (Previously presented) The method of claim 55 further comprising multiplexing user information over the plurality of reverse traffic channels.

60. (Previously presented) The method of claim 59, wherein the user information comprises voice and data.

61. (Previously presented) The method of claim 55 wherein the user device is a portable device comprising an integrated unit having a modem, a CDMA transceiver and a controller.

62. (Previously presented) The method of claim 61 wherein the portable device comprises a terminal equipment.

63. (Previously presented) The method of claim 55 wherein the user device includes an application layer.

64. (Previously presented) The method of claim 55 further comprising running an internet application.

65. (Previously presented) The method of claim 55 further comprising downloading a web page.

66. (Previously presented) The method of claim 55 further comprising:
transmitting CDMA signals on a selected transmission frequency out of a plurality of potential transmission frequencies; and
receiving CDMA signals on a selected reception frequency out of a plurality of potential reception frequencies.

67. (Previously presented) The method of claim 55 further comprising
retrieving a stored class of service information.

68. (Previously presented) The method of claim 55 further comprising
retrieving a stored maximum data rate associated with the user device.

69. (Previously presented) The method of claim 55 further comprising
assembling and buffering packet data for transmission over a traffic channel.

70. (Previously presented) The method of claim 55 further comprising
requesting a supplemental reverse traffic channel based on an amount of packet data in a packet data queue.

71. (Previously presented) The method of claim 55 further comprising
requesting a supplemental reverse traffic channel based on a priority of service of packet data in a packet data queue.

72. (Previously presented) The method of claim 55 further comprising
requesting a supplemental reverse traffic channel based on a short term estimated

data rate desired to transmit packet data.

73. (Previously presented) The method of claim 70 wherein the request for the supplemental reverse traffic channel is made independent of an existing forward channel allocation.

74. (Previously presented) A method for use in a code division multiple access (CDMA) user device, the method comprising:
simultaneously transmitting packet data over a plurality of reverse traffic channels associated with a packet data communication session, wherein each of the reverse traffic channels is associated with a CDMA code and at least three of the plurality of reverse traffic channels can have different data rates; and
maintaining a status of at least one layer of the packet data communication session above a physical layer of the packet data communication session upon release of the plurality of reverse traffic channels.

75. (Previously presented) The method of claim 74 further comprising monitoring a data buffer to detect a rate at which the buffer is filled.

76. (Previously presented) The method of claim 74 further comprising communicating a requested data rate for the packet data communication session to a base station in the network.

77. (Previously presented) The method of claim 74 further comprising simultaneously transmitting control, voice and data information to a base station in the network.

78. (Previously presented) The method of claim 74 further comprising simultaneously transmitting control, voice and data information to a base station in the network on separate ones of the plurality of reverse traffic channels.

79. (Previously presented) The method of claim 74 further comprising multiplexing user information over the plurality of reverse traffic channels.

80. (Previously presented) The method of claim 79 wherein the user information comprises voice and data.

81. (Previously presented) The method of claim 74 wherein the user device is a portable device comprising an integrated unit having a modem, a CDMA transceiver and a controller.

82. (Previously presented) The method of claim 81 wherein the portable device comprises a terminal equipment.

83. (Previously presented) The method of claim 74 wherein the user device includes an application layer.

84. (Previously presented) The method of claim 74 further comprising running an internet application.

85. (Previously presented) The method of claim 74 further comprising downloading a web page.

86. (Previously presented) The method of claim 74 further comprising:
transmitting CDMA signals on a selected transmission frequency out of a plurality of potential transmission frequencies; and
receiving CDMA signals on a selected reception frequency out of a plurality of potential reception frequencies.

87. (Previously presented) The method of claim 74 further comprising
retrieving a stored class of service information.

88. (Previously presented) The method of claim 74 further comprising
retrieving a stored maximum data rate associated with the user device.

89. (Previously presented) The method of claim 74 further comprising
assembling and buffering packet data for transmission over a traffic channel.

90. (Previously presented) The method of claim 74 further comprising
requesting a supplemental reverse traffic channel based on an amount of packet data in a packet data queue.

91. (Previously presented) The method of claim 74 further comprising
requesting a supplemental reverse traffic channel based on a priority of service of packet data in a packet data queue.

92. (Previously presented) The method of claim 74 further comprising
requesting a supplemental reverse traffic channel based on a short term estimated

data rate desired to transmit packet data.

93. (Previously presented) The method of claim 90 wherein the request for the supplemental reverse traffic channel is made independent of an existing forward channel allocation.

94. (Previously presented) A method for use in a wireless code division multiple access (CDMA) user device, the method comprising:

transmitting packet data simultaneously over a plurality of reverse traffic channels and receiving data over at least one forward traffic channel during a communication session between the user device and a network;

maintaining the communication session when all of the traffic channels have been released;

wherein each of the reverse traffic channels and the forward traffic channel is associated with a CDMA code; and

wherein at least three of the reverse traffic channels can have different data rates.

95. (Previously presented) The method of claim 94 further comprising maintaining the communication session without having to re-initialize an upper layer protocol associated with the communication session when all of the traffic channels have been released.

96. (Previously presented) The method of claim 94 wherein the user device is associated with a protocol architecture, the protocol architecture having at least a layer 1 and a layer 2, and wherein the upper layer protocol is a protocol

associated with a protocol architecture layer above the layer 2.

97. (Previously presented) The method of claim 95 wherein the upper layer protocol is a layer 3 protocol.

98. (Previously presented) The method of claim 95 wherein the upper layer protocol is a network layer protocol.

99. (Previously presented) The method of claim 95 wherein the upper layer protocol is an ISDN or other wireline digital protocol.

100. (Previously presented) The method of claim 94 wherein the user device is associated with a protocol architecture, the protocol architecture having at least a layer 1 and a layer 2, and wherein the one or more upper layer protocols are protocols associated with a protocol architecture layer or layers above the layer 2.

101. (Previously presented) The method of claim 100 wherein the one or more upper layer protocols are layer 3 protocols.

102. (Previously presented) The method of claim 100 wherein the one or more upper layer protocols are ISDN or other wireline digital protocols.

103. (Previously presented) The method of claim 94 wherein the communication session includes a network layer communication session.

104. (Previously presented) The method of claim 94 wherein the

communication session includes a layer 3 communication session.

105. (Previously presented) The method of claim 94 wherein the wireless CDMA user device is a portable wireless CDMA user device.

106. (Previously presented) The method of claim 94 further comprising releasing the traffic channels upon expiration of a first predetermined period of time of packet data inactivity between the user device and a base station in the network over the reverse traffic channels.

107. (Previously presented) The method of claim 94 further comprising requesting assignment of a supplemental reverse traffic channel by a base station in the network during the communication session, the supplemental reverse traffic channel being supplemental to a previously assigned reverse traffic channel.

108. (Previously presented) The method of claim 106 further comprising: requesting assignment of a supplemental reverse traffic channel during the communication session, the supplemental reverse traffic channel being supplemental to a previously assigned reverse traffic channel; and

wherein, once the supplemental reverse traffic channel is assigned, releasing it upon expiration of a second predetermined period of time.

109. (Previously presented) The method of claim 108 wherein the second predetermined period of time is determined by the user device.

110. (Previously presented) The method of claim 108 further comprising

extending the second predetermined period of time when packet data in a buffer of the user device exceeds a predetermined threshold.

111. (Previously presented) The method of claim 94 wherein the user device is a portable device comprising an integrated unit having a modem, a CDMA transceiver and a controller.

112. (Previously presented) The method of claim 111 wherein the portable device comprises a terminal equipment.

113. (Previously presented) The method of claim 94 wherein the user device includes an application layer.

114. (Previously presented) The method of claim 94 further comprising running an internet application.

115. (Previously presented) The method of claim 94 further comprising downloading a web page.

116. (Previously presented) The method of claim 94 further comprising:
transmitting CDMA signals on a selected transmission frequency out of a plurality of potential transmission frequencies; and
receiving CDMA signals on a selected reception frequency out of a plurality of potential reception frequencies.

117. (Previously presented) The method of claim 94 further comprising

retrieving a stored class of service information.

118. (Previously presented) The method of claim 94 further comprising retrieving a stored maximum data rate associated with the user device.

119. (Previously presented) The method of claim 94 further comprising assembling and buffering packet data for transmission over a traffic channel.

120. (Previously presented) The method of claim 94 further comprising monitoring a data buffer to detect a rate at which the buffer is filled.

121. (Previously presented) The method of claim 94 further comprising:
transmitting a request for a supplemental reverse traffic channel, the supplemental reverse traffic channel being supplemental to a previously assigned reverse traffic channel, to a base station in the network over a previously assigned channel, the supplemental reverse traffic channel request indicating characteristics of the user device's supplemental reverse packet data traffic needs; and
receiving supplemental reverse traffic channel assignment information from the base station in response to the request and transmitting packet data from the user device to the base station over the previously assigned reverse traffic channel and the supplemental reverse traffic channel in accordance with the received supplemental reverse traffic channel assignment information.

122. (Previously presented) The method of claim 121 wherein the previously established channel is a reverse control channel.

123. (Previously presented) The method of claim 121 wherein the previously assigned channel is a reverse traffic channel.

124. (Previously presented) The method of claim 121 wherein the previously assigned channel is the previously assigned reverse traffic channel.

125. (Previously presented) The method of claim 121 wherein the characteristics include a need for a particular user data rate.

126. (Previously presented) The method of claim 121 further comprising repeating the supplemental reverse traffic channel request if the supplemental reverse traffic channel assignment information is not received by the user device within a predetermined time.

127. (Previously presented) The method of claim 121 further comprising maintaining the supplemental reverse traffic channel so long as it is being utilized by the user device.

128. (Previously presented) The method of claim 121 wherein the characteristics further include a duration providing an indication of how long the user data rate need requires the particular data rate.

129. (Previously presented) The method of claim 121 wherein the characteristics include a duration for which the supplemental reverse traffic channel is required by the user device.

130. (Previously presented) The method of claim 121 wherein the supplemental reverse traffic channel is maintained for the duration.

131. (Previously presented) The method of claim 121 wherein the supplemental reverse traffic channel does not carry signaling or control traffic.

132. (Previously presented) The method of claim 94 further comprising using different traffic channels to support simultaneous voice and packet data calls.

133. (Previously presented) The method of claim 94 further comprising maintaining the communication session by maintaining a logical session connection.

134. (Previously presented) The method of claim 133 wherein the logical session connection is at a network layer protocol.

135. (Previously presented) The method of claim 121 further comprising requesting the supplemental reverse traffic channel based on an amount of packet data in a packet data queue.

136. (Previously presented) The method of claim 121 further comprising requesting the supplemental reverse traffic channel based on a priority of service of packet data in a packet data queue.

137. (Previously presented) The method of claim 121 further comprising requesting the supplemental reverse traffic channel based on a short term estimated data rate desired to transmit the packet data.

138. (Previously presented) The method of claim 121 wherein the requesting of the supplemental reverse traffic channel is independent of an existing forward channel allocation.

139. (New) A code division multiple access (CDMA) user device comprising:
a CDMA transceiver; and

a controller operably connected to the CDMA transceiver to establish a packet data communication session according to a protocol architecture, the protocol architecture having a plurality of protocol layers including a physical layer,

wherein the controller is further operable with the CDMA transceiver to facilitate use of a data traffic channel and a control channel associated with the packet data communication session, the data traffic channel including sixteen subchannels,

the control channel carrying information indicative of a data rate associated with the data traffic channel, wherein the control channel is not adapted to carry voice or data traffic, and

wherein a state of at least one of the plurality of protocol layers above the physical layer is maintained during the packet data communication session after the data traffic channel has been released.

140. (New) The CDMA user device of claim 139, wherein the CDMA transceiver is operable to simultaneously transmit the data traffic channel and the control channel to a base station.

141. (New) The CDMA user device of claim 139, wherein the data rate

varies over time.

142. (New) The CDMA user device of claim 139, wherein the CDMA user device is a portable device comprising an integrated unit having a modem, the CDMA transceiver and the controller, and the portable device includes terminal equipment.

143. (New) The CDMA user device of claim 139, wherein the CDMA transceiver is operable by the controller to transmit first CDMA signals on a transmission frequency, the transmission frequency being selected by the controller from a plurality of transmission frequencies, the CDMA transceiver also being operable by the controller to receive second CDMA signals on a reception frequency, the reception frequency being selected by the controller from a plurality of reception frequencies.

144. (New) The CDMA user device of claim 139, further comprising a memory configured to store class of service information, wherein the controller is operable to retrieve the class of service information stored in the memory.

145. (New) The CDMA user device of claim 139, further comprising a memory configured to store information related to a maximum data rate associated with the user device, wherein the controller is operable to retrieve the maximum data rate associated with the user device from the memory.

146. (New) A code division multiple access (CDMA) user device comprising:
a CDMA transceiver;

a controller operable with the CDMA transceiver to establish a packet data communication session according to a protocol architecture, the protocol architecture having a plurality of protocol layers including a physical layer,

the controller being operable with the CDMA transceiver to facilitate use of a data traffic channel and a control channel during the packet data communication session, wherein the data traffic channel and control channel are associated with corresponding CDMA codes and the control channel carries information indicative of a data rate associated with the data traffic channel, the data traffic channel including a plurality of subchannels, wherein the control channel is not adapted to carry voice or data traffic;

wherein a state of at least one of the protocol layers other than the physical layer is maintained during the packet data communication session after the data traffic channel has been released, and

wherein the controller is operable to determine whether to request the data traffic channel based on an amount of packet data in a packet data queue.

147. (New) The CDMA user device of claim 146, further comprising a channel multiplexer for multiplexing control and data traffic channels.

148. (New) The CDMA user device of claim 146, wherein the user device is a portable device comprising an integrated unit having a modem, the CDMA transceiver, and the controller.

149. (New) The CDMA user device of claim 146, wherein the CDMA transceiver is operable by the controller to transmit first CDMA signals on a transmission frequency, the transmission frequency being selected by the controller

from a plurality of transmission frequencies, the CDMA transceiver also being operable by the controller to receive second CDMA signals on a reception frequency, the reception frequency being selected by the controller from a plurality of reception frequencies.

150. (New) The CDMA user device of claim 146, wherein the CDMA user device further comprises a memory, the memory being configured to store class of service information, the controller being configured to retrieve the class of service information stored in the memory.

151. (New) The CDMA user device of claim 146, wherein the CDMA user device further comprises a memory, the memory being configured to store maximum data rate information associated with the user device, the controller being operable to retrieve the stored maximum data rate information associated with the user device from the memory.

152. (New) The CDMA user device of claim 146, wherein the controller is operable to determine whether to request the data traffic channel further based on an estimated data rate desired to transmit the packet data.

153. (New) A code division multiple access (CDMA) user device comprising:
a controller;
a CDMA transceiver operably connected to the controller, the CDMA transceiver being operable to transmit packet data over a data traffic channel associated with a packet data communication session, the CDMA transceiver also being operable to transmit a control channel carrying information indicative of a

data rate associated with the data traffic channel, such that the control channel is not adapted to carry voice or data traffic and the data traffic channel includes sixteen subchannels, wherein each of the data traffic and control channels is associated with a corresponding CDMA code wherein a plurality of protocol layers, including a physical layer, is associated with the packet data communication session, and a status of at least one of the plurality of protocol layers other than the physical layer is maintained upon release of the data traffic channel, and wherein the controller is operable to determine whether to request the data traffic channel based on an amount of packet data in a packet data queue.

154. (New) The CDMA user device of claim 153, wherein the user device is a portable device comprising an integrated unit having a modem, the CDMA transceiver and the controller, and the portable device comprises terminal equipment.

155. (New) The CDMA user device of claim 153, wherein the CDMA transceiver is operable by the controller to transmit first CDMA signals on a transmission frequency, the transmission frequency being selected by the controller from a plurality of transmission frequencies, the CDMA transceiver also being operable by the controller to receive second CDMA signals on a reception frequency, the reception frequency being selected by the controller from a plurality of reception frequencies.

156. (New) The CDMA user device of claim 153, wherein the CDMA user device comprises a memory, the memory storing class of service information, the controller being operable to retrieve the class of service information from the

memory.

157. (New) The CDMA user device of claim 153, wherein the CDMA user device includes a memory, the memory storing maximum data rate information associated with the CDMA user device, the controller being operable to retrieve the maximum data rate information from the memory.

158. (New) A code division multiple access (CDMA) user device comprising:
a CDMA transceiver; and

a controller operable with the CDMA transceiver such that the CDMA transceiver is operable to transmit packet data over a reverse data traffic channel and receive data over at least one forward traffic channel during a packet data communication session between the user device and a network, the packet data communication session including a first time period during which first packet data is transmitted or received by the user device, a second time period after the first time period during which the forward and reverse data traffic channels are released, and a third time period after the second time period during which second packet data is transmitted or received by the user device, the forward traffic channel including sixteen subchannels,

wherein each of the forward and reverse traffic channels is associated with a corresponding CDMA code,

wherein the controller is further operable with the CDMA transceiver to facilitate use of a control channel associated with the packet data communication session, the control channel carrying information indicative of a data rate associated with the reverse data traffic channel, wherein the control channel is not adapted to carry voice or data traffic, and

wherein the controller is also operable with the CDMA transceiver to establish the packet data communication session with the network according to a protocol architecture, the protocol architecture having a plurality of protocol layers including a physical layer, such that a state of at least one of the plurality of protocol layers other than the physical layer is maintained during the second time period.

159. (New) The CDMA user device of claim 158, wherein the second period of time includes a predetermined period of time of packet data inactivity between the user device and the base station in the network over the data traffic channel, wherein the forward and reverse data traffic channels are released upon expiration of the predetermined period of time.

160. (New) The CDMA user device of claim 158, wherein the CDMA transceiver is operable by the controller to transmit first CDMA signals on a transmission frequency, the transmission frequency being selected by the controller from a plurality of transmission frequencies, the CDMA transceiver also being operable by the controller to receive second CDMA signals on a reception frequency, the reception frequency being selected by the controller from a plurality of reception frequencies.

161. (New) The CDMA user device of claim 158, wherein the CDMA user device includes a memory, the memory storing maximum data rate information associated with the CDMA user device, the controller being operable to retrieve the maximum data rate information from the memory.

162. (New) A base station comprising:
circuitry configured to receive data, the data having a priority;
a buffer configured to store the data;
circuitry configured to establish a link layer connection with a subscriber unit;
circuitry configured to schedule a transmission of the data to the subscriber unit based on the priority;
circuitry configured to transmit the data to the subscriber unit over a first number of channels during a first time interval and a second number of channels during a second time interval, the first number of channels being different than the second number of channels; and
circuitry configured to maintain the link layer connection in an absence of the CDMA channels.

163. (New) The base station of claim 162, wherein the data includes voice data, having a first priority, the base station also being configured to receive non-voice traffic data having a second priority, the first priority being higher than the second priority.

164. (New) A subscriber unit, comprising:
an antenna configured to transmit a signal; and
a circuit coupled to the antenna, the circuit being configured to:
establish a link layer connection with a code division multiple access (CDMA) network;
transmit a message to the CDMA network, the message being carried by the signal and being based on an amount of data in a queue and a priority

associated with the data; and

receive a message from the CDMA network, the message indicating that the subscriber unit is schedule to transmit data to the CDMA network,

wherein the data is transmitted over a first number of channels during a first time interval and a second number of channels during a second time interval, the first number of channels being different than the second number of channels, and the circuit is configured to maintain the link layer connection in an absence of the first and second number of channels.